

Joint Fires Initiative
(JFI)
supporting the
Joint Operations Concepts
(JOpsC)

23 October 2003

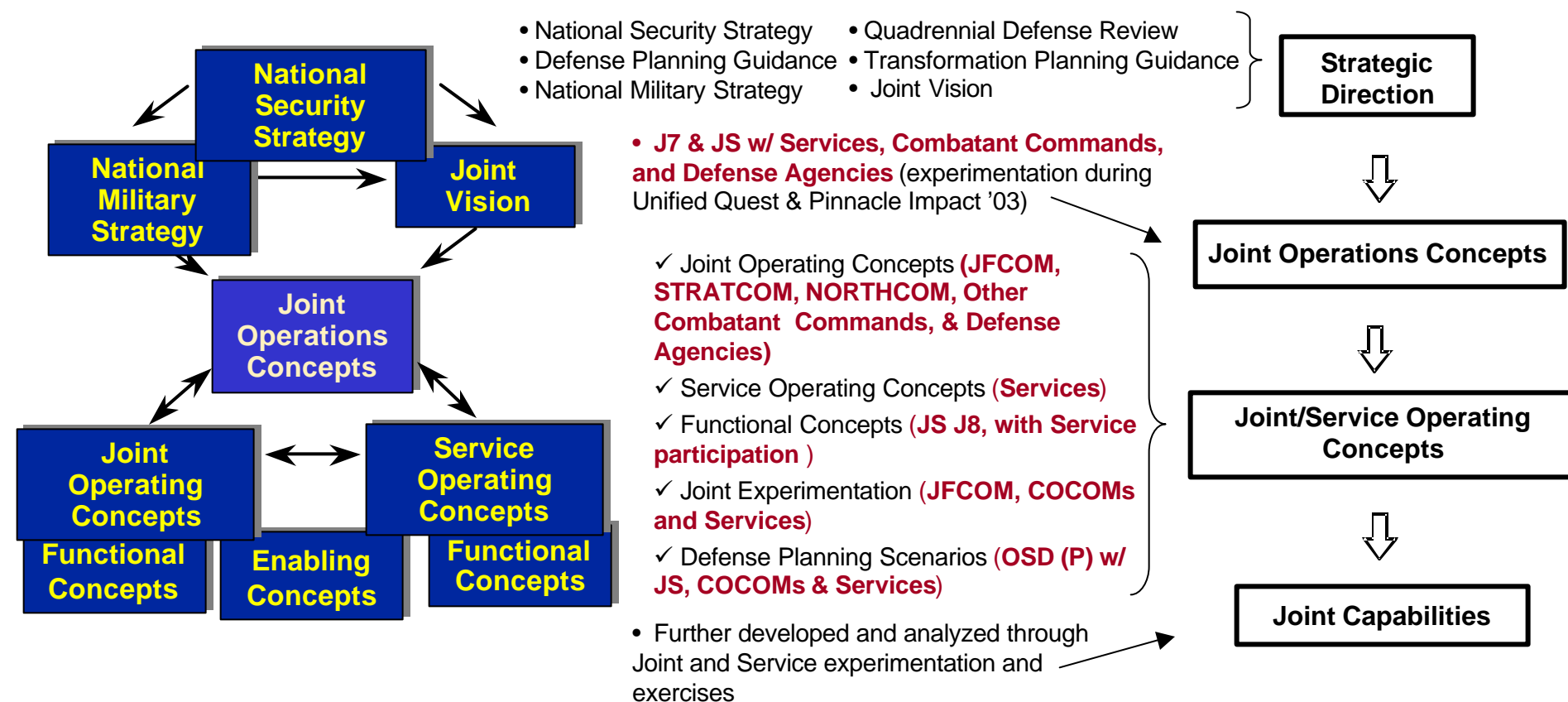
**LtCol Mark Werth
03 November 2003**

Agenda

- Joint Operations Concepts
- Joint Fires Problem Sets
- Joint Fires Initiative

Joint Operations Concepts ***(JOpsC)***

Joint Operations Concepts



Joint Operations Concepts

An **overarching** articulation of how the **future Joint Force intends to operate** across the **entire** range of military operations. It is the **unifying framework for developing** subordinate operating **concepts**, functional concepts, enabling concepts, and integrated capabilities. It **assists in structuring joint experimentation and assessment activities** to validate subordinate concepts and capabilities-based requirements.

The Central Idea

Full Spectrum Dominance

Full spectrum dominance is based on the ability to sense, understand, decide, and act faster than any adversary in any situation. These actions are preceded by decisions that are lead by better understanding of the battlespace. This will allow commanders to act simultaneously or sequentially, to achieve the desired end state. This will allow us to impose our will on the adversary at the least cost in lives and national treasure.

Attributes of the Joint Force

- ★ Fully Integrated: capabilities are born joint and are able to integrate into a focused effort with a unified purpose
- Expeditionary: Rapidly deployable, employable, and sustainable--regardless of anti-access environments
- ★ Networked: Linked and synchronized in time and purpose--allowing dispersed forces to communicate, maneuver, and share a common operating picture
- ★ Decentralized: collaborative planning and shared knowledge to empower subordinate commanders to compress decision cycles
- ★ Adaptable: Forces that are tailorable and scalable, prepared to quickly respond to any contingency
- Decision Superiority: Gain and maintain information superiority to shape the situation or react to changes
- ★ Lethal (or Effective): Capability to destroy an adversary and/or his systems in all conditions and environments using kinetic and/or non-kinetic means

JOpsC Common Core Capabilities

- ★ Achieve common understanding of all dimensions of the battlespace throughout the joint force.
- ★ Make joint decisions and take action throughout the joint force *faster than the opponent*.
- ★ Adapt in scope, scale, and method as the situation requires.
- Rapidly deploy selected portions of the joint force who can immediately transition to execution, even in the absence of developed infrastructure.
- Create and sustain continuous pressure throughout the battlespace for as little or as long as it take to accomplish strategic or operational aims.
- ★ Disintegrate, disorient, dislocate, or destroy any opponent with a combination of lethal and non-lethal means.
- ★ Conduct deployment and sustainment activities in support of multiple simultaneous, distributed, decentralized battles and campaigns.
- ★ Accomplish all of the above in an inter-agency and multi-national context.

Way Ahead

- JOpsC Awaiting final approval by JCS enroute to SecDef.
- JOCs and Functional Concepts under development
- All to SecDef in Jan.
- Start the next version of JOpsC after submission of operating and functional concepts (*JOpsC to be revised every two years*)

Joint Fires Problem Set

Joint Fires Defined

JP 3-09 Definition:

Fires produced during the employment of forces from two or more components in coordinated action toward a common objective."

JP3-09, "Doctrine for Joint Fire Support", pg I-1

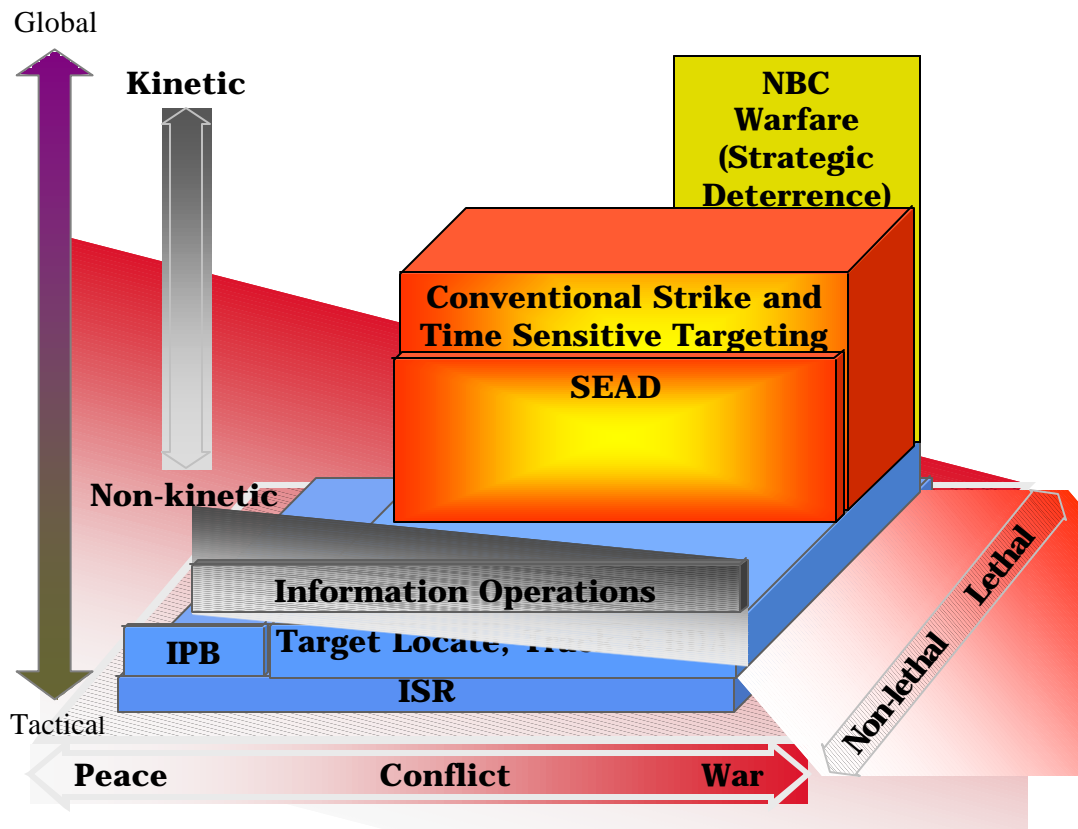
Joint Experimentation Focus

Bring about the effects of...

- **Lethal and non-lethal weapons**
- **Kinetic and non-kinetic weapons**
- **Strategic to Tactical levels**

...across the spectrum of military operations

Joint Fires Domain

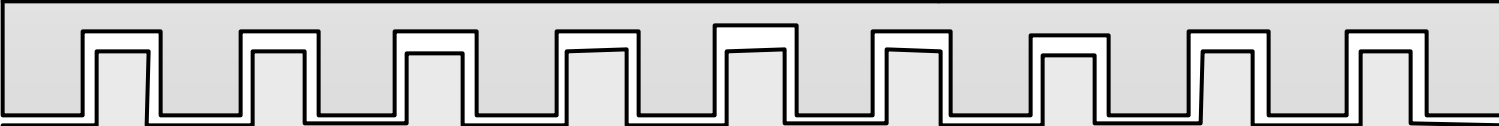


Joint Fires is the ability of Joint force to:

- Locate, surveil, discern, and track named areas of interest.
- Select, organize, and use the appropriate resources.
- Generate the desired effects.
- Assess results.
- Reengage with decisive speed and overwhelming operational tempo as required.

Effects Based Application of Joint Fires is the ability to generate desired precision engagement effects throughout the full range of military operations created by the “integration” of joint fires assets (coupled with maneuver and information operations, enabled by leadership, full dimensional protection and focused logistics).

Horizontal and Vertical Integration Across Joint and Functional Seams

Mission Managers	ATO Visualization		Time Sensitive Targeting	
Joint Fires and Engagement		Kill Box Management		Predictive BDA
Airspace Command and Control		Battlespace Fires and Airspace Planning		
3D Visualization		Air/Ground Deconfliction		ATO Planning and Execution
				
Fires	Intelligence	Maneuver	Aviation	Missile Defense
Fire Planning Inventory Fire Control Location Status	Fusion Correlation Databases Collection	Unit Locations Unit Status Logistics Battlefield	Msn Planning Logistics Airspace Mgt Status	Employment Envelopes Defense Ops. Prot. Zones

Joint Applications Add and Integrate Joint Functions and Fills Critical Functional Short Falls

Joint Fires: A Historical Problem

- In previous 20th century conflicts, **supporting fires** (air and artillery) accounted for nearly **75% of fratricide** incidents and an even greater proportion of friendly fire casualties.¹
- Observation from Operation URGENT FURY: the **integration** and **synchronization** of **fire support** becomes critical when the commander has not only field artillery, but also Air Force close air support (CAS), Marine Corps CAS, Navy CAS, and/or naval gunfire support available.²
- During Operation JUST CAUSE, mistaking the friendly fire for the enemy mortar fire, ground units suffered **several needless casualties** prior to transmitting the appropriate alarm.³
- In DESERT STORM, misuse of the fire support coordination line directly contributed to the **escape of two divisions** of the Republican Guards.⁴ Also, locating and destroying mobile missiles proved **very difficult** and required substantially more resources than planned. This **could be a more serious** problem in the future against an enemy with more accurate missiles or one who uses weapons of mass destruction.⁵

Joint Fires Initiative

The Issue

TST prosecution/fire support coordination has been an ongoing issue of the joint force.

JFI Block I was created to improve the JTF's ability to coordinate TST missions and improve sensor-to-shooter timelines through near real-time collaboration on a common, automated tool suite.

JFI Block II continues the successes achieved in MC02 and OIF, and pursues a prototyping effort that will improve the Joint Force's capability to manage and prosecute fires through a broader range of jointly integrated fires and fire support functionalities enabled through a common set of automated tools and procedures from strategic to tactical levels.

Holistically, JFI will network cross-component targeting information to more efficiently prosecute TST (and eventually all target sets) fire support missions by improving joint fires situational awareness to achieve the vision of the Joint Future Fires enabling concept.

JFI Approach

**JFI Block 1
MC02
TST**

Migrating the MC02 TST Management Capability - To the Integrated Management, and Prosecution, of all Joint Fires Problems Sets - To establish and deliver a Joint Networked Fires to the Warfighter

Today-FY 04

**Phase I
JTSTM
&
JTFW**

JFI Block 2

FY04-05

**Phase II
LPI/Experimentation
Rapid Prototyping
Development**

**JISR Two year
ACTD (start FY06)**

FY06-07

**Phase III
TEBO
&
JISR**

JFI Block 1 Vision Statement

1. The JFI *improves management efficiency* of Time Sensitive Targets (TSTs) through *collaboration* provided by a *common* tool suite and automated processes for the Joint Task Force (JTF) and all Component Commanders.
2. JFI *shares timely* targeting information and provides *horizontal* coordination among components during the management and prosecution of TST(s).

Provides for the first time, a common capability that enables components to manage Time Sensitive Targets (TST) using a jointly integrated suite of targeting tools that increases *Situational awareness* and *knowledge* thus enabling more effective strike decision-making and execution.

- a. Common Joint Force Functional Tool Suite
- b. Common Joint Force Network/Backbone
- c. Common Joint Force Automated Processes
- d. Operates within the Joint Force Engagement C2 Architecture

JFI Common Functions

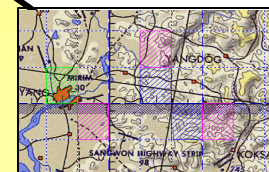
Tool's Coordination & Management Capabilities

Battlespace Planning

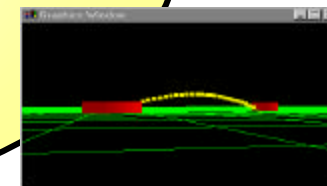


Joint Battlespace Management

Sharing Battlespace Coordination Measures

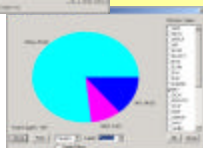
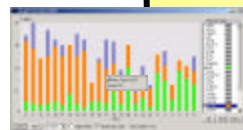


Kill Box Management



Airspace Deconfliction

- Provide Users the Same Information
- Tools That Produce the Same Results
- Ensure Horizontal Integration of Information, Tools, and Coordination



Air & Maritime Tasking Order Integration and Visualization



Cross Component TST Management

- ✓ Experimented in MC02
- ✓ Validated in Operation Iraqi Freedom
- ✓ Resident in USFK, CENTCOM, EUCOM, SOCOM, and PACOM

JFI Block 2 Vision Statement

As a complementary effort to JFI Block 1; Block 2 pursues a prototyping effort that will improve the Joint Force's capability to **manage** and **prosecute** fires through a broader range of **jointly integrated** fires and fire support functionalities enabled through a **common set** of automated tools and procedures from **strategic to tactical** levels.

Which:

- **Coordinates** the efforts of various DoD fires and fire support efforts towards **a single** jointly interoperable set of functionalities and processes from operational to tactical levels. (JFI/JTSTM, JACKKNIFE, JCAS, JTFWARNET et.al.)
- **Integrates** joint fires and fire support capabilities from the **operational to tactical** levels with a common set of automated functionalities and processes.
- **Bridges** the service operational architectures across three functional domains
 - Knowledge
 - Command and Control (Battle Management)
 - CONOPs and TTPs
- Pursuing **Interoperability** of Joint Intelligence, Surveillance, and Reconnaissance (JISR), and command and control (people, processes and technology) architectures into a **singular** fires prosecution mechanism
- **Supports** joint force, multinational and interagency partners across the full spectrum of military operations

JFI Phase I

(Today - FY04)

Endstate: *Increased* JFI/JTSTM functionalities that integrate engagement zones battle space coordination measures, no fire areas, restricted fire lines.

- **JFI/JTSTM being used in CENTCOM and EUCOM to manage Time Sensitive Targets. Exercise this capability in PACOM during Terminal Fury 04**
- **Demonstrate JFI/JTSTM integration with JTF WARNET in Cobra Gold 04**

JFI Phase II (FY04 - FY05)

Endstate: A jointly integrated/interoperable, fires and fire support management and prosecution capability, *enabled by* JISR that support the joint force from strategic to tactical level.

- **Continue joint efforts to integrate service fire control systems that enable sharing targeting information and functionality from tactical to strategic**
 - **Leveraging existing programs**
 - **Injecting rapid prototyping to address voids**
 - **Verify in Experimentation**
 - **Validate in JNTC events**

Joint Fires Prototyping Hypotheses

IF:

A common capability exists that enables components to manage and prosecute fires using an integrated (not deconflicted) operational architecture that is fully networked with Intelligence, Surveillance, and Reconnaissance resources

THEN:

A coalition force will operate as a fires entity enabled by an integrated fires suite that facilitates timely fires.

JFI Block 2 - Phase II

LOE 1 & 2 Objectives

Quick-win Rapid Prototyping Supported by Experimentation.

- Leverage current programs of record, program, coupled with rapid prototyping endeavors to address joint fires gaps, rendering an 85-95% integration solution.
- Integrate existing Joint Fires applications to provide an avenue for a joint fires/targeting solution in FY04.
- Address voids with quick-win Prototyping endeavors.
 - Quick-Win rapid prototyping to address requirement gaps identified in LOEs.
- Prototype Validation Events (Limited Objective Experiments/JNTC Events).

- Will address 85-95% of engagement problem sets in FY04
- Addresses tactical to operational linkage in FY04
- Coordinated methodology between J8 and J9, USJFCOM

JFI-2 LOE POA&M (Tentative)

	<u>Date</u>	<u>Event</u>
1.	11-14 Nov 03	Prototype JFI LOE 1&2 Pre-CDC
2.	27-29 Jan 04	Prototype JFI LOE 1&2 CDC
3.	6-8 Apr 04	Prototype JFI LOE 1&2 IPC
4.	18-21 May 04	Prototype JFI LOE 1&2 MPC
5.	1-3 Jun 04	Prototype JFI LOE 1 FPC
6.	7-10 Jun 04	Prototype JFI LOE 1 Tech Spiral 1
7.	6-8 Jul 04	Prototype JFI LOE 1
8.	9 Jul 04	Prototype JFI LOE 1 Hot wash
9.	14-16 Jul 04	Prototype JFI LOE 2 FPC
10.	9-13 Aug 04	Prototype JFI LOE 2 Tech Spiral 1
11.	7-10 Sep 04	Prototype LOE 04 Training
12.	13-16 Sep 04	Prototype LOE 04 Execution
13.	12-14 Oct 04	Prototype LOE 04 Analyst Workshop

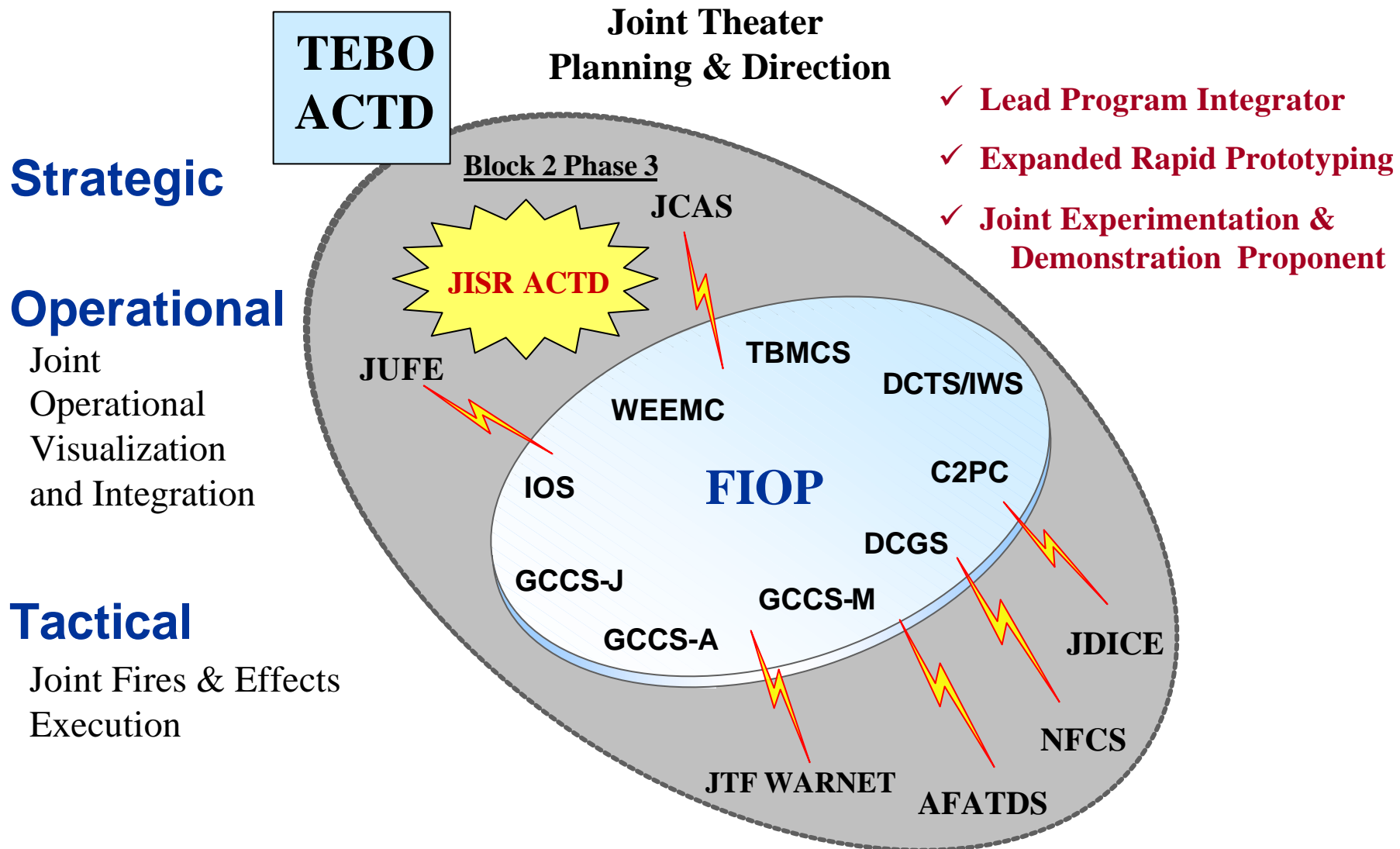
JFI Phase III

(FY06 – FY07)

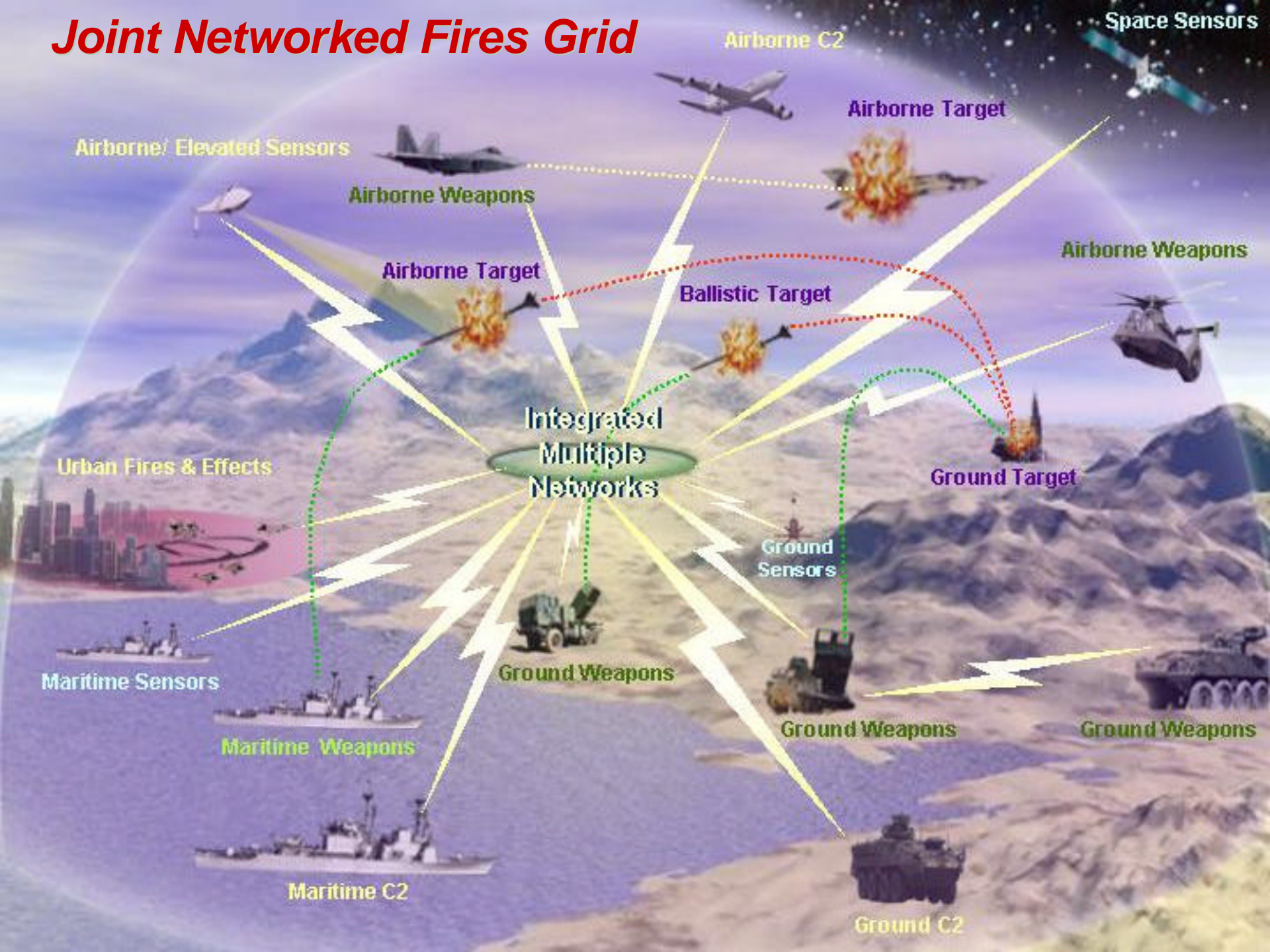
Endstate: A jointly integrated/interoperable, fires and fire support capability, *integrating* JISR, and C2 architectures into a *singular* fires prosecution capability that supports the joint force, multinational and interagency partners across the full spectrum of military operations from strategic to tactical level.

- **Continue joint efforts to integrate service fire control systems and JISR from tactical to strategic**
- **Complete transition of JFI functionality into Family of Interoperable Operational Pictures (FIOP)**

Overview: The Big Picture



Joint Networked Fires Grid



“And let there be no doubt, in the years ahead it is likely that we will be surprised again by new adversaries who may also strike in unexpected ways. And as they gain access to weapons of increasing power--and let there be no doubt but that they are--these attacks will grow vastly more deadly than those we suffered several months ago. Our challenge in this new century is a difficult one. It's really to prepare to defend our nation against the unknown, the uncertain and what we have to understand will be the unexpected. That may seem on the face of it an impossible task, but it is not.”

SecDef Rumsfeld

Questions?

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